UNITED STATES PATENT AND TRADEMARK OFFICE

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LOWE HAUPTMAN HAM & BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER
MORRIS, JOHN J

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/564,178	NAM ET AL.
	Examiner	Art Unit	
	John Morris	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *03 February 2009*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-35* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-35* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some *   c)☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 02/03/2009 have been fully considered but they are not persuasive.

In regards to claim 1, the applicant argues that Yu does not teach "a scroll action operates to change a position of the partial picture within the high resolution picture". The examiner agrees however the argument is moot upon new grounds of rejection. The applicant argues that Yu does not teach scrolling between the individual subsections. The examiner respectfully disagrees. Yu teaches scrolling between different subsections by using the keypad to scroll down or up. For instance the user may scroll down by selection a subsection 5 in figure 5b, then selecting subsection 8. This would perform the scroll operation by using the keypad and subsections.

In regards to claim 14, the applicant argues the same arguments as in claim 1. However, the applicant did not amend claim 14 with the limitation "a scroll action operates to change a position of the partial picture within the high resolution picture". Yu teaches scrolling between different subsections by using the keypad to scroll down or up. For instance the user may scroll down by selection a subsection 5 in figure 5b, then selecting subsection 8. This would perform the scroll operation by using the keypad and subsections.

In regards to claim 27, the applicant argues that the office action is silent regarding where Yu discloses or suggests the recited "converted file database" configured to store picture file formatted data, and the "storing unit" configured to: generate indexes for each of the divided unit blocks; generate a file converted into a picture file formatted data that includes the picture data

and indexes of each unit block; and store the picture file formatted data in the converted file database. The examiner respectfully disagrees. Yu discloses a converted file database in column 7, lines 1-23, and figure 3a. Here, Yu teaches a server that receives an image in an original format and then processes it and then sends it to a mobile device. It is inherent that converted file is stored when it is sent to the mobile device; therefore it is stored in a converted file database. You also teaches a storing unit configured to generate indexes of each of the divided unit blocks (Yu, column 8, lines 18-32, and figure 3a-3b), the storing unit further configured to generate a file converted into a picture file format including the picture data and indexes of each unit block (Yu, column 8, lines 18-32, and figure 3a-3b), and further configured to store the converted file in the converted file database (Yu, column 8, lines 18-32, and figure 3a-3b). Here Yu teaches the image being divided into a number of sub areas and displayed on the screen, each with an associated index. In order for the display to properly display the sub areas it is inherent that the picture data and indexes are generated and stored because this is required for the device to work.

The applicant also argues that Yu appears to only disclose a link server with an image database for storing image data according to an original version of the image. The applicant also argues that unlike the recited database that includes indexes of the divided unit blocks, Yu's link server appears to only suggest a database for storing information related to a specific mobile device, the information including screen size and resolution and identification data. Once the link server has the information about the requesting mobile device, the link server will then convert the original image into a format that can be received by the mobile device and then transmit the converted image to the requesting mobile device. Furthermore, Yu's converted images are not

stored in a database within the link server, but are generated only after a specific mobile device

submits a request. (See Yu, Figs. 6A, 6B, and column 8, lines 32-51, and column 9, line 10-16).

The examiner respectfully disagrees. Once the files are converted within the link server, it is

inherent that they are stored in memory somewhere; therefore they are stored in a converted file

database within the link server. It is also inherent that once this data is transmitted to the mobile

device, it is stored in memory in the mobile device; therefore it is also stored in a converted file

database in the mobile device.

      In regards to claim 32, the applicant argues the same arguments as in claim 27. The

examiner respectfully disagrees based on the reasoning stated above.

      In regards to claims 2-13, 15-26, and 33-35, the applicant argues that these dependent

claims are allowable. The examiner respectfully disagrees based on the reasoning stated above.

      Therefore, the applicant's arguments have been considered but are not persuasive,

therefore the rejection stands.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 14, 27, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Yu et

al. (US Pat# 6684087 B1/ *or "Yu" hereinafter*).

        For **claim 14,** Yu teaches receiving picture data through a mobile communications

network (Yu, column 3, lines 9-20); formatting the received picture data into picture file

formatted data including a plurality of unit blocks of picture data and index information

(Yu, column 7, lines 1-25, figure 5 and 7); extracting a minimum number of unit blocks

of picture data from the picture file formatted data (Yu, column 7, lines 1-25, figure 5 and

7); generating a partial picture using the extracted minimum number of unit blocks and

the index information (Yu, column 7, lines 1-25, figure 5 and 7); and outputting the

partial picture to the display unit (Yu, column 7, lines 1-25, figure 5 and 7); and

extracting corresponding unit blocks of picture data from the picture file formatted data

in a movement direction by using the index information, and outputting a position-moved

picture based on a scroll action generated during the display of the picture (Yu, column 7,

lines 1-25, figure 5 and 7).

        For **claim 27,** Yu teaches a system configured to convert a picture file format, the

system comprising a format converting server connected to a packet data service node

and a picture providing server of a mobile communication system (Yu, figure 1, item

104, 100, or 110, column 7, lines 1-23), the system configured to display the picture data

format from the picture providing server in a mobile communication system, the mobile

communication terminal comprising: a base transceiver system configured to wirelessly

communicate with the mobile communication terminal (Yu, column 3, lines 53-67, figure

1); a base station controller configured to control the base transceiver system(Yu, column

3, lines 53-67, figure 1); a packet data service node connected to the base station

controller and configured to provide data services to the mobile communication terminal

(Yu, column 3, lines 53-67, figure 1); and a picture providing server configured to

provide picture data to the mobile communication terminal through the packet data

service node (Yu, figure 1) wherein the format converting server comprises: a received

file database configured to store picture data from at least one of the mobile

communication terminal and picture providing server, and a converted file database

configured to store a format-converted file of the picture data (Yu, column 7, lines 1-23,

and figure 3a). Here, Yu teaches a server that receives an image in an original format and

then processes it and then sends it to a mobile device. It is inherent that converted file is

stored when it is sent to the mobile device; therefore it is stored in a converted file

database. Yu teaches a picture data receiving unit configured to receive the picture data

from the picture providing server (Yu, column 7, lines 1-25, figure 1); a picture dividing

unit configured to divide the picture of the picture data into a plurality of unit blocks (Yu,

column 8, lines 18-32, and figure 3a-3b); a storing unit configured to generate indexes of

each of the divided unit blocks (Yu, column 8, lines 18-32, and figure 3a-3b), the storing

unit further configured to generate a file converted into a picture file format including the

picture data and indexes of each unit block (Yu, column 8, lines 18-32, and figure 3a-3b),

and further configured to store the converted file in the converted file database (Yu,

column 8, lines 18-32, and figure 3a-3b). Here Yu teaches the image being divided into a

number of sub areas and displayed on the screen, each with an associated index. In order

for the display to properly display the sub areas it is inherent that the picture data and

indexes are generated and stored because this is required for the device to work. Yu also

teaches a converted file transmitting unit configured to transmit the converted file to the

mobile communication terminal or picture providing server (Yu, figure 3a-3b).

For **claim 32,** Yu teaches a format converting server (Yu, figure 1, item 114), the

format converting server connected to a packet data service node and a picture providing

server of a mobile communication system (Yu, figure 1, item 104, 100, or 110, column 7,

lines 1-23) and converting the format of the picture data (Yu, column 8, lines 18-32, and

figure 3a-3b), the mobile communication system comprising: a base transceiver system

configured to wirelessly communicate with the mobile communication terminal (Yu,

column 3, lines 53-67, figure 1); a base station controller configured to control the base

transceiver system(Yu, column 3, lines 53-67, figure 1); a packet data service node

connected to the base station controller and configured to provide data services to the

mobile communication terminal (Yu, column 3, lines 53-67, figure 1); and a picture

providing server configured to provide picture data to the mobile communication

terminal through the packet data service node (Yu, figure 1) the method comprising: Yu

also teaches dividing, at the format converting server, picture data received from the

mobile communication terminal or picture providing server: into a plurality of unit blocks

(Yu, column 8, lines 18-32, and figure 3a-3b); generating indexes that provide access to

each divided unit block of picture data (Yu, column 8, lines 18-32); and generating a file

converted into picture file format (Yu, column 7, lines 1-23, column 8, lines 18-32):

including the index information and each of the unit blocks(Yu, column 7, lines 1-23,

column 8, lines 18-32).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu et al. (US Pat#

6684087 B1/ *or "Yu" hereinafter*) in view of Nagata et al. (US Pat# 6701017 B1 *"Nagata"*

hereinafter).

For **claim 1,** Yu teaches a mobile communication terminal configured to display a

high resolution picture, comprising a wireless communication unit configured to receive

picture data through a mobile communication network (Yu, column 3, lines 9-20). Yu

teaches a picture data processing unit configured to receive the picture data in picture file

format (Yu, column 7, lines 1-25), to extract a minimum number of unit blocks using

index information of the picture file formatted data (Yu, column 7, lines 1-25, figure 5

and 7) and output a partial picture based upon the minimum number of unit blocks data

(Yu, column 7, lines 1-25, figure 5 and 7). Yu teaches a display unit configured to

display the partial picture (Yu, figure 2). Yu does not teach a scroll action operates to

change a position of the partial picture within the high resolution picture; however, in the

same field of endeavor, Nagata teaches a scroll action operates to change a position of the

partial picture within the high resolution picture (Nagata, column 13 line 65 – column 14

line 7). It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Yu with Nagata because this would allow for the user to view

enlarged portions of the picture.

3.   Claims 2-5, 15, 16, 17, 18, 21, 28, 29, 31, 34, and 35 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Yu et al. (US Pat# 6684087 B1/ *or "Yu" hereinafter*) in view of

Nagata et al. (US Pat# 6701017 B1 published 08/12/1999/ *or "Nagata" hereinafter*) and Lim

(US Pat# 7233807 B2).

        For **claim 2**, Yu teaches a memory configured to store the picture data and the

picture in picture file format including a plurality of unit blocks and indexes (Yu, figure

3b), the memory further including: Yu teaches a selecting unit for selecting the unit

blocks to be outputted to the display and extracting the selected block by using the index

information (Yu, column 7, lines 1-56). Yu does not teach a frame buffer; however, in

the same field of endeavor, Lim teaches a frame buffer for buffering the picture that will

be outputted to the display unit (Lim, column 13). It would have been obvious that the

frame buffer could be either the decoding frame buffer or the screen frame buffer since

the buffer itself does not change. Lim teaches buffering the picture that will be outputted

to the display (Lim, column 13). It would have been obvious to one of ordinary skill in

the art at the time of the invention to modify Yu with Lim because both deal with display

images on mobile devices and the addition of the buffer could reduce the amount of time

waiting for an image to load.

     For **claim 3**, Yu does not teach decompressing the image; however, in the same

field of endeavor, Lim teaches the image processor decompressing the image (Lim,

column 11, lines 12-34). It would have been obvious to one of ordinary skill in the art at

the time of the invention to modify Yu with Lim because both deal with display images

on mobile devices and decompressing the image can restore the image to a better quality.

     For **claim 4,** Yu teaches picture information containing the size of display screen

and unit blocks (Yu, Column 2, lines 10-25). Yu teaches reducing the size of the image to

fit into the screen of the mobile device and then inherently dividing the image into a

number of sub areas, therefore, picture information is being used that contains the size of

the display screen and unit blocks. Yu does not teach a picture header including the size

of the whole picture; however, in the same field of endeavor, Lim teaches using JPEG

images (Lim, column 12, lines 55-61). It is well known in the art that a JPEG image may

include header information including the size of the whole picture. Lim also teaches

using screen data and scaling the image based on specification of the display unit (Lim,

column 11, lines 12-34). Lim teaches the image processor generating a thumbnail picture

and displaying the information on the display unit (Lim, column 12, lines 55-61). It is

obvious that the image processor extracted the supplementary information of the picture

file format or else the processor would not have been able to generate nor display the

thumbnail. It would have been obvious to one of ordinary skill in the art at the time of

the invention to modify Yu with Lim because both deal with display images on mobile

devices and the use of JPEG images can take up less memory.

For **claim 5,** Yu does not teach picture thumbnails; however, in the same field of

endeavor, Lim teaches the image processor generating a thumbnail picture and displaying

the information on the display unit (Lim, column 12, lines 55-61). It is obvious that the

image processor extracted the supplementary information of the picture file format or else

the processor would not have been able to generate nor display the thumbnail. It would

have been obvious to one of ordinary skill in the art at the time of the invention to modify

Yu with Lim because both deal with display images on mobile devices and generating a

thumbnail can help the user select the image without have to wait for full size images to

load.

For **claim 15,** Yu teaches picture information containing the size of display screen

and unit blocks (Yu, Column 2, lines 10-25). Yu teaches reducing the size of the image to

fit into the screen of the mobile device and then inherently dividing the image into a

number of sub areas; therefore, picture information is being extracted and used. Yu does

not teach a picture header including the size of the whole picture; however, in the same

field of endeavor, Lim teaches using JPEG images (Lim, column 12, lines 55-61). It is

well known in the art that a JPEG image may include header information including the size of the whole picture. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yu with Lim because both deal with display images on mobile devices and the use of JPEG images can take up less memory.

For **claim 16,** Yu does not teach picture thumbnails; however, in the same field of endeavor, Lim teaches the image processor generating a thumbnail picture and displaying the information on the display unit (Lim, column 12, lines 55-61). It is obvious that the image processor extracted the supplementary information of the picture file format or else the processor would not have been able to generate nor display the thumbnail. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yu with Lim because both deal with display images on mobile devices and generating a thumbnail can help the user select the image without have to wait for full size images to load.

For **claim 17**, Yu teaches a memory configured to store the picture data and the picture in picture file format including a plurality of unit blocks and indexes (Yu, figure 3b), the memory further including: Yu teaches a selecting unit for selecting the unit blocks to be outputted to the display and extracting the selected block by using the index information (Yu, column 7, lines 1-56). Yu does not teach a frame buffer; however, in the same field of endeavor, Lim teaches a frame buffer for buffering the picture that will be outputted to the display unit (Lim, column 13). It would have been obvious that the

frame buffer could be either the decoding frame buffer or the screen frame buffer since

the buffer itself does not change. Lim teaches buffering the picture that will be outputted

to the display (Lim, column 13). It would have been obvious to one of ordinary skill in

the art at the time of the invention to modify Yu with Lim because both deal with display

images on mobile devices and the addition of the buffer could reduce the amount of time

waiting for an image to load.

For **claim 18**, Yu does not teach decompressing the image; however, in the same

field of endeavor, Lim teaches the image processor decompressing the image (Lim,

column 11, lines 12-34). It would have been obvious to perform the decompressing after

extracting the data because the processor would need the data so it can decompress it and

before buffering the picture data because buffering can be used to reduce any delays

when displaying the image, therefore decompressing after buffering would negate some

of the benefits of buffering.

For **claim 28,** Yu teaches picture information containing the size of display screen

and unit blocks (Yu, Column 2, lines 10-25). Yu teaches reducing the size of the image to

fit into the screen of the mobile device and then inherently dividing the image into a

number of sub areas; therefore, picture information is being extracted and used. Yu does

not teach a picture header including the size of the whole picture; however, in the same

field of endeavor, Lim teaches using JPEG images (Lim, column 12, lines 55-61). It is

well known in the art that a JPEG image may include header information including the

size of the whole picture. It would have been an obvious matter of design choice to have

the storing unit produce the header since such a modification only requires a mere change

of location of the software. It would have been obvious to one of ordinary skill in the art

at the time of the invention to modify Yu with Lim because both deal with display images

on mobile devices and the addition of Lim could help reduce the size of the picture file.

For **claim 29,** Yu does not teach picture thumbnails; however, in the same field of

endeavor, Lim teaches the image processor generating a thumbnail picture and displaying

the information on the display unit (Lim, column 12, lines 55-61). It is obvious that the

image processor extracted the supplementary information of the picture file format or else

the processor would not have been able to generate nor display the thumbnail. It would

have been an obvious matter of design choice to have the storing unit produce the header

since such a modification only requires a mere change of location of the software. It

would have been obvious to one of ordinary skill in the art at the time of the invention to

modify Yu with Lim because both deal with display images on mobile devices and the

addition of Lim could help reduce the size of the picture file.

For **claim 31**, Yu does not teach decompressing the image; however, in the same

field of endeavor, Lim teaches the image processor decompressing the image (Lim,

column 11, lines 12-34). It would have been obvious to one of ordinary skill in the art at

the time of the invention to modify Yu with Lim because both deal with display images on mobile devices and the addition of Lim could help reduce the size of the picture file.

For **claim 34,** Yu teaches picture information containing the size of display screen and unit blocks (Yu, Column 2, lines 10-25). Yu teaches reducing the size of the image to fit into the screen of the mobile device and then inherently dividing the image into a number of sub areas, therefore, picture information is being. Yu does not teach a picture header including the size of the whole picture; however, in the same field of endeavor, Lim teaches using JPEG images (Lim, column 12, lines 55-61). It is well known in the art that a JPEG image may include header information including the size of the whole picture. It would have been an obvious matter of design choice to generate the picture header after dividing the picture data into a plurality of blocks because the size of the picture and blocks would need to be known before and after the picture is divided. It would have been obvious to do this before generating the converted file because the picture header is needed to generate the complete converted file. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yu with Lim because both deal with display images on mobile devices and the addition of Lim could help reduce the size of the picture file.

For **claim 35,** Yu does not teach picture thumbnails; however, in the same field of endeavor, Lim teaches the image processor generating a thumbnail picture and displaying the information on the display unit (Lim, column 12, lines 55-61). It is obvious that the

image processor extracted the supplementary information of the picture file format or else

the processor would not have been able to generate nor display the thumbnail. It would

have been an obvious matter of design choice to generate the thumbnail after dividing the

picture data into a plurality of blocks because the thumbnail could be generated before or

after the picture is divided. It would have been obvious to do this before generating the

converted file because the supplementary information is needed to generate the complete

converted file. It would have been obvious to one of ordinary skill in the art at the time

of the invention to modify Yu with Lim because both deal with display images on mobile

devices and the addition of Lim could help reduce the size of the picture file.

4.   Claims 6-10, 22-24, 30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Yu et al. (US Pat# 6684087 B1/ *or "Yu" hereinafter*) in view of Nagata et al. (US Pat#

6701017 B1 published 08/12/1999/ *or "Nagata" hereinafter*) and Sano et al. (US Pub#

20020196970 A1/ *or "Sano" hereinafter*).

        For **claim 6,** Yu teaches receiving the image wirelessly from a server (Yu, Figure

1). Yu also teaches display the received image on the mobile device in a plurality of unit

blocks with indexes to each block (Yu, column 3, lines 9-20). Yu teaches memory for

storing the picture data (Yu, figure 3b). Yu does not teach a format converting unit

within the mobile device; however, in the same field of endeavor, Sano teaches a format

converting unit (which may or may not be housed within a mobile device) that divides

the image into blocks (Sano, page 3, paragraph [0032]). It would have been obvious to

one of ordinary skill in the art at the time of the invention to modify Yu with Sano

because both deal with images and the addition of the format converting unit could

reduce the file size of the image allowing less memory to be used to store the image.

For **claim 7,** Yu teaches memory for storing the picture data (Yu, figure 3a). Yu

also teaches displaying the received image on the mobile device in a plurality of unit

blocks with indexes to each block (Yu, column 3, lines 9-20). Yu does not teach a format

converting unit within the mobile device; however, in the same field of endeavor, Sano

teaches a format converting unit (which may be housed within a mobile device) that

divides the image into blocks (Sano, page 3, paragraph [0032]).

For **claim 8,** Sano teaches compressing each block individually (Sano, page 3,

paragraph [0032]). Sano teaches that this technique is beneficially in memory reduction

and therefore it is obvious that the compressed blocks are stored in memory.

For **claim 9,** Sano teaches decompressing each block individually (Sano, page 3,

paragraph [0032]).

For **claim 10,** Yu teaches picture information containing the size of display screen

and unit blocks (Yu, Column 2, lines 10-25). Yu teaches reducing the size of the image to

fit into the screen of the mobile device and then inherently dividing the image into a

number of sub areas, therefore, picture information is being used that contains the size of

the display screen and unit blocks. Yu does not teach a picture header including the size

of the whole picture; however, in the same field of endeavor, Sano teaches using JPEG

images (Sano, page 2, paragraph [0027]). It is well known in the art that a JPEG image

may include header information including the size of the whole picture. Sano also

teaches that each block has its on header (Sano, page 2, paragraph [0024]). It would have

been an obvious matter of design choice to have the storing unit produce the header since

such a modification only requires a mere change of location of the software.

      For **claim 22,** Yu teaches receiving the image wirelessly from a server (Yu,

Figure 1). Yu also teaches display the received image on the mobile device in a plurality

of unit blocks with indexes to each block (Yu, column 3, lines 9-20). Yu teaches

memory for storing the picture data (Yu, figure 3b). Yu does not teach a format

converting unit within the mobile device; however, in the same field of endeavor, Sano

teaches a format converting unit (which may be housed within a mobile device) that

divides the image into blocks (Sano, page 3, paragraph [0032]). It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify Yu with

Sano because both deal with images and the addition of Sano could help reduce the file

size of the image allowing less memory to be used to store the image.

      For **claim 23,** Yu teaches receiving the image wirelessly from a server (Yu,

Figure 1). Yu also teaches display the received image on the mobile device in a plurality

of unit blocks with indexes to each block (Yu, column 3, lines 9-20). Yu teaches

memory for storing the picture data (Yu, figure 3b). Yu teaches this new picture file

displayed (Yu, figure 5b). Yu does not teach a format converting unit within the mobile

device; however, in the same field of endeavor, Sano teaches a format converting unit

(which may be housed within a mobile device) that divides the image into blocks (Sano,

page 3, paragraph [0032]).

For **claim 24,** Sano teaches compressing each block individually (Sano, page 3,

paragraph [0032]). It is obvious that this step is performed after the picture data is

divided into blocks because this is necessary to compress each block individually.

For **claim 30,** Sano teaches compressing each block individually (Sano, page 3,

paragraph [0032]). Sano teaches that this technique is beneficially in memory reduction

and therefore it is obvious that the compressed blocks are stored in memory. It would

have been obvious to one of ordinary skill in the art at the time of the invention to modify

Yu with Sano because both deal with images and the addition of Sano could help reduce

the file size of the image allowing less memory to be used to store the image.

For **claim 33,** Sano teaches compressing each block individually (Sano, page 3,

paragraph [0032]). It would have been obvious to do this after dividing the picture data

since it is necessary to be divided to compress each block individually. It would have

been obvious to one of ordinary skill in the art at the time of the invention to modify Yu

with Sano because both deal with images and the addition of Sano could help reduce the

file size of the image allowing less memory to be used to store the image.

5.   Claims 11-13, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yu et al. (US Pat# 6684087 B1/ *or "Yu" hereinafter*) in view of Nagata et al. (US Pat# 6701017

B1 published 08/12/1999/ *or "Nagata" hereinafter*) and Sano et al. (US Pub# 20020196970 A1/

or "Sano" hereinafter) and Lim (US Pat# 7233807 B2).

For **claim 11,** Yu and Sano do not teach picture thumbnails; however, in the same

field of endeavor, Lim teaches the image processor generating a thumbnail picture and

displaying the information on the display unit (Lim, column 12, lines 55-61). It is

obvious that the image processor extracted the supplementary information of the picture

file format. It would have been an obvious matter of design choice to have the storing

unit produce the supplementary information used for the thumbnail since such a

modification only requires a mere change of location of the software. It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify Yu and

Sano with Lim because all deal with images and generating a thumbnail image could

assist the user in selecting the correct image while using less bandwidth and memory for

the larger size images.

For **claim 12,** Yu and Sano do not teach an external input port; however, in the

same field of endeavor, Lim teaches an external input port (Lim, column 12, lines 25-29).

Lim teaches using an external camera; therefore there must be an external input port. It would have been obvious to convert, index, and store the image from the external camera because the mobile terminal is still receiving an image, only from a different device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yu and Sano with Lim because all deal with images and the addition of Lim could assist the user in selecting the correct image while using less bandwidth and memory for the larger size images.

Claim 13 is rejected upon the same grounds as claim 12.

For **claim 25,** Yu teaches picture information containing the size of display screen and unit blocks (Yu, Column 2, lines 10-25). Yu teaches reducing the size of the image to fit into the screen of the mobile device and then inherently dividing the image into a number of sub areas, therefore, picture information is being. Yu does not teach a picture header including the size of the whole picture; however, in the same field of endeavor, Lim teaches using JPEG images (Lim, column 12, lines 55-61). It is well known in the art that a JPEG image may include header information including the size of the whole picture. It would have been an obvious matter of design choice to generate the picture header after dividing the picture data into a plurality of blocks because the size of the picture and blocks would need to be known before and after the picture is divided. It would have been obvious to do this before generating the converted file because the picture header is needed to generate the complete converted file. It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify Yu and

Sano with Lim because all deal with images and the addition of Lim could assist the user

in selecting the correct image while using less bandwidth and memory for the larger size

images.

For **claim 26,** Yu does not teach picture thumbnails; however, in the same field of

endeavor, Lim teaches the image processor generating a thumbnail picture and displaying

the information on the display unit (Lim, column 12, lines 55-61). It is obvious that the

image processor extracted the supplementary information of the picture file format or else

the processor would not have been able to generate nor display the thumbnail. It would

have been an obvious matter of design choice to generate the thumbnail after dividing the

picture data into a plurality of blocks because the thumbnail could be generated before or

after the picture is divided. It would have been obvious to do this before generating the

converted file because the supplementary information is needed to generate the complete

converted file. It would have been obvious to one of ordinary skill in the art at the time

of the invention to modify Yu and Sano with Lim because all deal with images and the

addition of Lim could assist the user in selecting the correct image while using less

bandwidth and memory for the larger size images.

6.   Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu et

al. (US Pat# 6684087 B1/ *or "Yu" hereinafter*) in view of Minami (US Pub# 20030117407 A1).

For **claim 19,** Yu does not teach calculating the movement position in accordance with generation of scroll; however, in the same field of endeavor, Minami teaches calculating movement position in accordance with generation of scroll action and re-selecting image blocks for displaying and deciding whether picture data exists in the buffer and displaying the picture (Minami, page 4, paragraph [0048] – paragraph [0050]). It would have been obvious to one of ordinary skill in the art to modify Yu with Minami because both deal with image displays and the addition of calculating the movement position would improve the usability by decreasing the latency to view parts of the image.

For **claim 20,** Yu does not teach calculating the movement position of scrolling; however, in the same field of endeavor, Minami teaches extracting block picture data using index information when the predicted partial image is not in the buffer and storing the image blocks (Minami, page 4, paragraph [0050]).

7.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu et al. (US Pat# 6684087 B1/ *or "Yu" hereinafter*) in view of Minami (US Pub# 20030117407 A1) and Lim (US Pat# 7233807 B2).

For **claim 21**, Yu does not teach decompressing the image; however, in the same field of endeavor, Lim teaches the image processor decompressing the image (Lim, column 11, lines 12-34). It would have been obvious to perform the decompressing after

extracting the data because the processor would need the data so it can decompress it and before correcting the decoding frame buffer because buffering can be used to reduce any delays when displaying the image, therefore decompressing after correcting the decoding the frame buffer would negate some of the benefits of buffering. It would have been obvious to one of ordinary skill in the art at the invention was made to modify Yu and Minami with Lim because all deal with the same subject matter and decompressing the image can restore the image to a better quality.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Noguchi et al. (US Pat# 6046734) discloses an image processor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Morris whose telephone number is (571)270-7171. The examiner can normally be reached on Monday-Friday, 7am-3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629